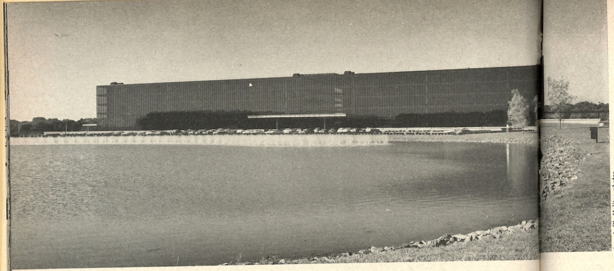


BELL LABS' MIRRORED SUPERBLOCK

Saarinen's design for an engineering lab in New Jersey
features a six-story reflecting wall 700 ft long
and a balconied reception court five stories high



Joseph W. Molitor photos

Development Center, Bell Telephone Laboratories, Holmdel, N. J.

ARCHITECT: *Eero Saarinen and Associates*

LANDSCAPE ARCHITECTS: *Sasaki, Walker and Associates*

STRUCTURAL ENGINEERS: *Severud-Elstad-Krueger Associates*

ELECTRICAL AND MECHANICAL ENGINEERS: *Jaros, Baum and Bolles*

TRAFFIC CONSULTANTS: *Barton-Aschman Associates*

ACOUSTICAL CONSULTANTS: *Bolt, Beranek and Newman, Inc.*

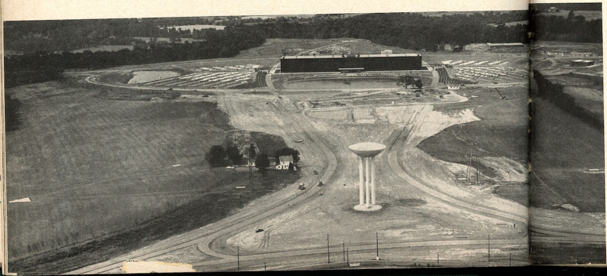
GENERAL CONTRACTOR: *Frank Briscoe Construction Co.*

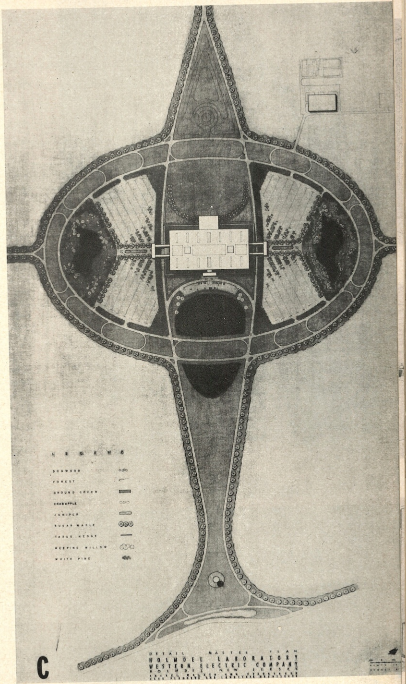
OVER-ALL ENGINEERING AND CONSTRUCTION DIRECTION: *Western Electric Co.*

In many locations a wall of mirrored glass five stories high and 700 ft long would be an architectural disaster. But in the gently rolling openness of the South Jersey terrain—tree-dotted, but not densely wooded as is New England—the new Bell Telephone Laboratories Engineering Development Center, when finally glazed with reflecting glass, will have just the right amount of glitter to give it great style and elegance. Its precise, hard, shiny surfaces—and its rectilinearity—will make effective contrast with the soft curves and dips and rises of the countryside. Its character—akin to the machine-perfect products its users will develop—will be peculiarly appropriate.

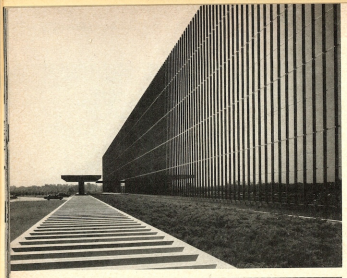
As is the case in producing many new products, manufacturing difficulties were encountered here in pioneering with a low-brightness reflective glass. As a result, one wall was glazed with an experimental product (see page 149) and the remainder with gray heat-resisting glass, so the building could be used. It appears a satisfactory laminated mirror glass will soon be available to replace the substitute gray glass.

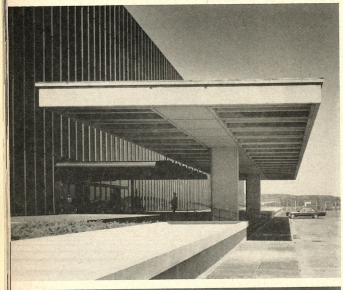
The plot plan at right shows the final twin-building scheme, of which one half is now completed. The 460-acre site is approached from a highway lying to the north, or bottom, of the plan. The largest of the four pools—six acres, 6,000,000 gals—is directly in front of the building, serves for condenser-water spray cooling and as a fire-fighting reserve. Each of the one-way, elliptical ring roads carries traffic in opposite directions, neatly sorting motorists by destination. Thanks to overhead bridges, pedestrians never need cross a road. Truck and auto traffic are separated

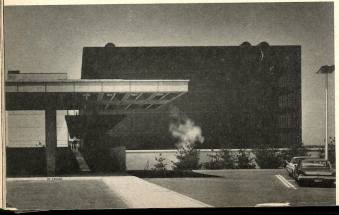




C







and the building will then assume th
look the architect intended.

Of the spirit of the design, architec
Eero Saarinen said, "Its material an
its structure should be appropriate t
the advanced technology of our time
The building should appear as a gian
pavilion on the central axis of a park
like garden, comprising the driveway
and a reflecting lagoon."

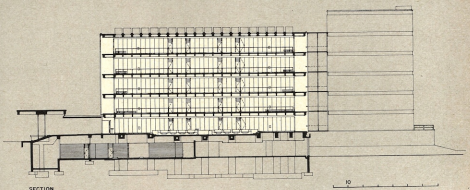
Of the plan, Saarinen said, "Afte
much study, we arrived at a radically
new plan, based on the idea of puttin
all labs and offices in interior space o
short, cross-block corridors, with th
entire glass periphery free for mai
corridors.

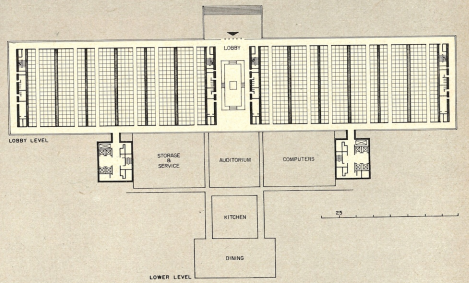
"In its final stage, the building wil
consist of four long-span blocks, sep
arated by a cross-shaped space with
interior garden courts, all under one
roof. The plan of each of the four units
can be thought of as the gridiron of a
football field, with corridors running
around the outside of the rectangle.

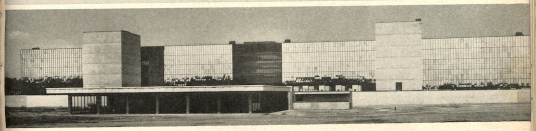
"The advantages of this plan are
many. Flexibility is at a maximum.
Each of the cross-building cores is the
width of seven 6-ft modules. The
entire core can be used as an open area
—such as drafting or typing pool—or
split into 18-, 24-, or 12-ft-wide areas.
Services supplied to the lab blocks are
kept to a minimum in office areas, but
they can be quickly converted to lab
use by adding services through the ver-
tical risers from the source.

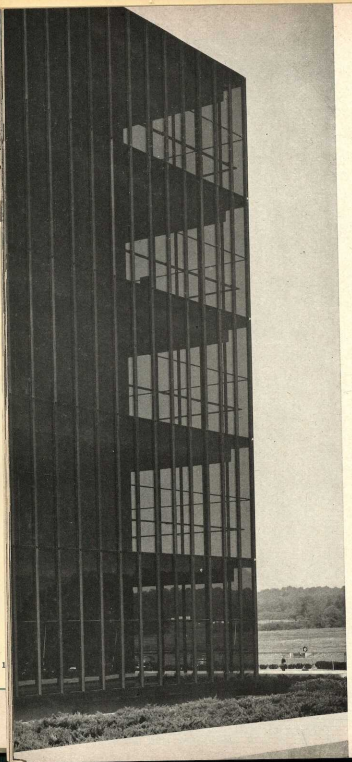
"The plan provides privacy for indi-
viduals in their offices and yields a
controlled environment with air condi-
tioning and modern lighting, efficient
and flexible storage-wall space and,
particularly important in the labs,
unlimited flexibility in arrangement of
furniture and equipment.

"The scheme also assures short, pri-
vate corridors with minimum disturb-





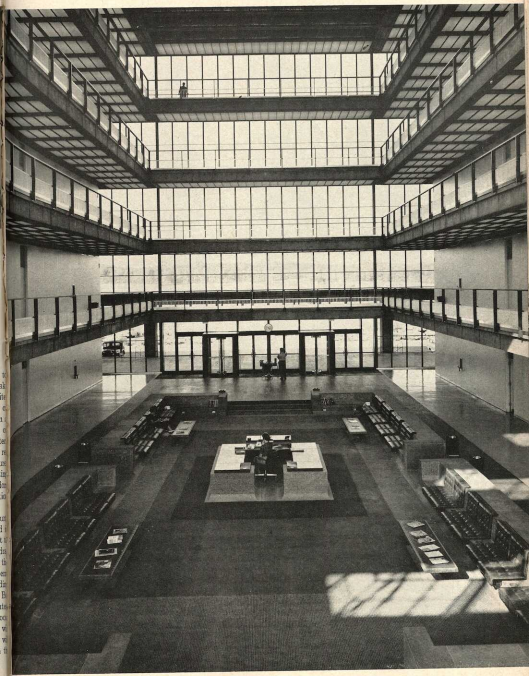




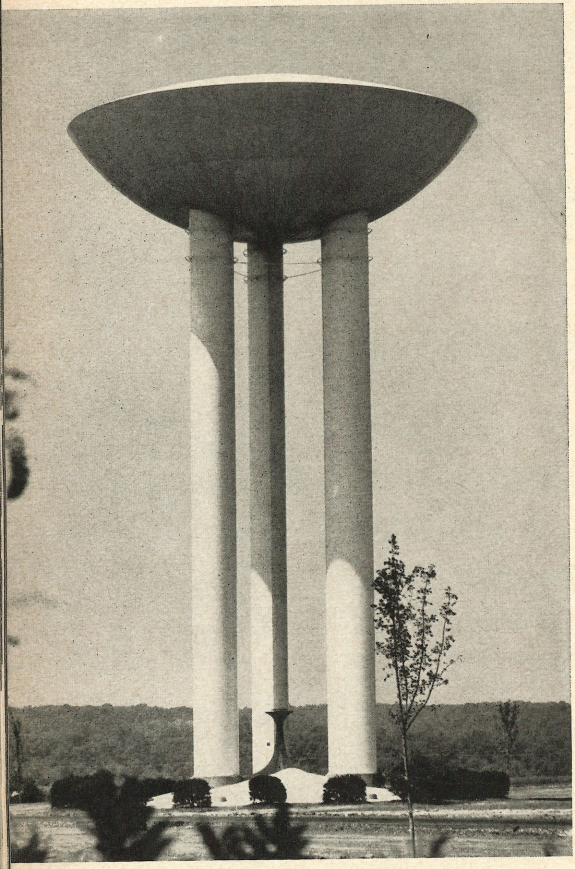


ance, since major traffic is relegated t
periphery corridors, which permit tak
ing full advantage of the country sitt
Emerging from concentration in lab o
office, the individual will come upon
sweeping view of the countryside a
the formal planting of the winter
garden interior court, and feel re
freshed by his encounter with nature
The corridor walk becomes an excitin
one at the points where the corridor
become balconies in the reception
court."

The vast, balconied reception court
which rises through five floors and
roofed by a skylight, cuts from front t
back of the building to create a dra
matic focus for the entire interior of th
structure. In the final stage, an em
ployee's lounge in the other buildin
block will create its counterpart. Be
tween them, the five-story-high winte
garden court will become the new foc
of the entire complex. Its planting w
be formal in character, and it wi
contain orange trees, growing from t
giant concrete planting boxes.



Bell Telephone Laboratory, Holmdel, N. J.



At the highway entrance and on axis with the building, a graceful water tower, holding 300,000 gals, rises 127 ft above grade. Saarinen says of its design, "A water tower should not be hidden away; it is a necessary functional thing, but can also be a proud and beautiful vertical accent, like a piece of sculpture." The tank, 72 ft in diameter, is illuminated by projected light from the center of its base, which provides a graded wash on the bowl-shaped upper element.

One of the building's facilities—in addition to auditorium, transcription service, restaurant, medical department, computer center, etc.—is a technical library (photo below) with a present capacity of 14,000 volumes and 500 periodicals. It and the other common service elements will serve a working population of 4,500 employes

